

**Listing of Claims:**

Please cancel claims 1-10 without prejudice and insert therefore new claims 11-34 as follows:

11. (New) A mixture for preparing a disintegrative casting core for high pressure casting, the mixture comprising:

- a) 70-95% by weight of a fusible, water-soluble salt or salts; and
- b) 5-30% by weight of chemically non-reactive, fine hard particles, said fine hard particles being selected from the group consisting of powders, fibers, and whiskers of metal ceramics and mixtures thereof; and

wherein the mixture has a melting point in the range from 280 to 520°C and a heat conductive coefficient ( $\kappa$ ) in the range from  $9.8 \times 10^{-2}$  to  $1.2 \times 10^1 \text{ W/m}^\circ\text{C}$ , and having a high heat latent heat for melting; and wherein said fusible, water-soluble salt or salts is selected from the group consisting of CuCl, PbCl<sub>2</sub>, a mixture of NaCl (82% by weight) and CuCl (18% by weight), a mixture of KNO<sub>3</sub> (92% by weight), and KCl (8% by weight), a mixture of KCl (54% by weight) and LiCl (46% by weight), a mixture of MgCl<sub>2</sub> (54% by weight) and NaCl (46% by weight), a mixture of CaCl<sub>2</sub> (53% by weight) and BaCl<sub>2</sub> (47% by weight) and a mixture of NaCl (54% by weight) and CaCl<sub>2</sub> (46% by weight)

12. (New) The mixture of claim 11, wherein the fusible, water-soluble salt or salts is a mixture of NaCl (82% by weight) and CuCl (18% by weight).

13. (New) The mixture of claim 11, wherein the fusible, water-soluble salt or salts is a mixture of KNO<sub>3</sub> (92% by weight) and KCl (8% by weight).

14. (New) The mixture of claim 11, wherein the fusible, water-soluble salt or salts is a mixture of KCl (54% by weight) and LiCl (46% by weight),

15. (New) The mixture of claim 11, wherein the fusible, water-soluble salt or salts is a mixture of CaCl<sub>2</sub> (53% by weight) and BaCl<sub>2</sub> (47% by weight).

16. (New) The mixture of claim 11, wherein the fusible, water-soluble salt or salts is a mixture of NaCl (54% by weight) and CaCl<sub>2</sub> (46% by weight).

17. (New) The mixture of claim 11, wherein the fusible, water-soluble salt is CuCl.
18. (New) The mixture of claim 11, wherein the fusible, water-soluble salt is PbCl<sub>2</sub>.
19. (New) The mixture of claim 11, wherein the fusible, water-soluble salt or salts has a particle size of about 40 to 100 μm.
20. (New) The mixture of claim 11, wherein the chemically non-reactive, fine hard particles are alumina (Al<sub>2</sub>O<sub>3</sub>) particles which are about 40-100 μm in diameter.
21. (New) The mixture of claim 11, wherein the chemically non-reactive, fine hard particles are silicon carbide (SiC) particles which are about 0.5 – 1 μm in diameter, and about 100 – 400 μm in length.
22. (New) A disintegrative core for high pressure casting comprising:
- a) 70-95% by weight of a fusible, water-soluble salt or salts; and
  - b) 5-30% by weight of a chemically non-reactive, fine hard particles, said fine hard particles being selected from the group consisting of powders, fibers, whiskers of metal ceramics and mixtures thereof; and
- wherein the mixture has a melting point in the range from 280 to 520°C and a heat conductive coefficient ( $\kappa$ ) in the range from  $9.8 \times 10^{-2}$  to  $1.2 \times 10^1$  W/m·°C, and having a high heat latent heat for melting, and wherein said fusible, water-soluble salt or salts is selected from the group consisting of CuCl, PbCl<sub>2</sub>, a mixture of NaCl (82% by weight) and CuCl (18% by weight), a mixture of KNO<sub>3</sub> (92% by weight), and KCl (8% by weight), a mixture of KCl (54% by weight) and LiCl (46% by weight), a mixture of MgCl<sub>2</sub> (54% by weight) and NaCl (46% by weight), a mixture of CaCl<sub>2</sub> (53% by weight) and BaCl<sub>2</sub> (47% by weight) and a mixture of NaCl (54% by weight) and CaCl<sub>2</sub> (46% by weight).
23. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt or salts is a mixture of NaCl (82% by weight) and CuCl (18% by weight).

24. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt or salts is a mixture of  $\text{KNO}_3$  (92% by weight) and  $\text{KCl}$  (8% by weight).
25. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt or salts is a mixture of  $\text{KCl}$  (54% by weight) and  $\text{LiCl}$  (46% by weight),
26. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt or salts is a mixture of  $\text{CaCl}_2$  (83% by weight) and  $\text{BaCl}_2$  (47% by weight).
27. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt or salts is a mixture of  $\text{NaCl}$  (54% by weight) and  $\text{CaCl}_2$  (46% by weight).
28. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt is  $\text{CuCl}$ .
29. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt is  $\text{PbCl}_2$ .
30. (New) The disintegrative core of claim 22, wherein the fusible, water-soluble salt or salts has a particle size of about 40 to 100  $\mu\text{m}$ .
31. (New) The disintegrative core of claim 22, wherein said chemically non-reactive, fine hard particles are alumina ( $\text{Al}_2\text{O}_3$ ) particles which are about 40-100  $\mu\text{m}$  in diameter.
32. (New) The disintegrative core of claim 22, wherein said chemically non-reactive, fine hard particles are silicon carbide ( $\text{SiC}$ ) particles which are about 0.5 – 1  $\mu\text{m}$  in diameter, and about 100 – 400  $\mu\text{m}$  in length.
33. (New) A method for preparing a disintegrative core for high pressure casting comprising the steps of:
- a) providing a mixture comprising 70-95% by weight of a fusible, water-soluble salt or salts; and 5-30% by weight of chemically non-reactive, fine hard particles, said fine hard particles being selected from the group consisting of powders, fibers, and whiskers of metal ceramics and mixtures thereof; and wherein the mixture has a melting point in the range from 280 to 520°C and a heat conductive coefficient ( $\kappa$ ) in the range from  $9.8 \times 10^{-2}$  to  $1.2 \times 10^1 \text{ W/m}^\circ\text{C}$ , and having a

high heat latent heat for melting, and wherein said fusible, water-soluble salt or salts is selected from the group consisting of CuCl, PbCl<sub>2</sub>, a mixture of NaCl (82% by weight) and CuCl (18% by weight), a mixture of KNO<sub>3</sub> (92% by weight), and KCl (8% by weight), a mixture of KCl (54% by weight) and LiCl (46% by weight), a mixture of MgCl<sub>2</sub> (54% by weight) and NaCl (46% by weight), a mixture of CaCl<sub>2</sub> (53% by weight) and BaCl<sub>2</sub> (47% by weight) and a mixture of NaCl (54% by weight) and CaCl<sub>2</sub> (46% by weight);

- b) melting the mixture at the temperature higher by 30-80°C than that of the melting point thereof;
- c) casting the molten mixture into a mold made of graphite which is preheated to half of the melting point of the mixture;
- d) cooling the mold and the core contained therein; and
- e) removing the cooled core from the mold.

34. (New) A method for preparing a disintegrative core high pressure casting comprising the steps of:

- a) providing a mixture comprising 70-95% by weight of a fusible, water-soluble salt or salts; and 5-30% by weight of a chemically con-reactive, fine hard particles, said fine hard particles being selected from the group consisting of powders, fibers, and whiskers of metal ceramics and mixtures thereof; and wherein the mixture has a melting point in the range from 280 to 520°C and a heat conductive coefficient ( $\kappa$ ) in the range from  $9.8 \times 10^{-2}$  to  $1.2 \times 10^1 \text{ W/m} \cdot ^\circ\text{C}$ , and having a high heat latent heat for melting, and wherein said fusible, water-soluble salt(s) is selected from the group consisting of CuCl, PbCl<sub>2</sub>, a mixture of NaCl (82% by weight) and CuCl (18% by weight), a mixture of KNO<sub>3</sub> (92% by weight), and KCl (8% by weight), a mixture of KCl (54% by weight) and LiCl (46% by weight), a mixture of MgCl<sub>2</sub> (54% by weight) and NaCl (46% by weight), a mixture of CaCl<sub>2</sub> (53% by weight) and BaCl<sub>2</sub> (47% by weight) and a mixture of NaCl (54% by weight) and CaCl<sub>2</sub> (46% by weight);
- b) grinding the mixture into a powder with a particle size of about 40 - 100 $\mu\text{m}$ ;
- c) introducing the powder into the mold;
- d) pressuring the powder in the mold under a pressure of about 80 – 100 Mpa; and
- e) removing the cooled core form the mold.